

## **REMARKS**

Claim 1 is amended to recite “an edible compound selected from the group consisting of hydroxypropylmethyl cellulose (HPMC), hydroxypropyl cellulose (HPC), methyl cellulose (MC), carboxymethyl cellulose (CMC), ethylmethyl cellulose (EMC), maltodextrin (MD), and their mixtures.” Claim 7 is amended to recite “edible compound consists of a cellulose ether selected from the group consisting of hydroxypropylmethyl cellulose (HPMC), hydroxypropyl cellulose (HPC), methyl cellulose (MC), carboxymethyl cellulose (CMC), ethylmethyl cellulose (EMC) and their mixtures.”

Claim 23 is amended to recite “an edible polysaccharide in powder form.”

Support for these amendments can be found throughout the specification as filed, for example, Examples, 1, 2, and 3. No new matter is added by these amendments.

Claims 4-6, 8, 14-17, 29, 33-37 are canceled. Accordingly, Claims 1-3, 7, 9-13, 18-28 and 30-32 are pending.

### **35 U.S.C. § 103(a)**

Claims 1-3, 9-12, 20, 21 and 23 are rejected under 35 U.S.C. § 103(a) over Mate (Mate J.I. *et al.*, (1997) J. Agric. Food Chem. 45:2509-2513). Claims 7, 13, and 16 are rejected over Mate in view of Grillo (US 5,470,581).

Claim 1-3, 9-13, 17-23, 25, 27-28, and 30-32 are rejected under 35 U.S.C. § 103(a) over Steele (WO 83/00278) in view of Grillo (U.S. 5,470,581) and Mate. Claims 7 and 16 are rejected under 35 U.S.C. § 103(a) over Steele in view of Grillo, Mate and Kester (Kester J.J., *et al.* (1989) Journal of Food Science 54:1383-1389). Claims 24 and 26 are rejected under 35 U.S.C. § 103(a) over Steele in view of Grillo, Mate and Fellows (Fellows P.J., *et al.* (2001) Food Processing technology – Principles and Practice, 2<sup>nd</sup> Edition).

### **Rejection of Claims 1-3, 7, 9-13, 16, 20, 21 and 23 over Mate and Grillo**

With regard to Claims 1-3, the Examiner contends that Mate discloses a coated nut comprising a nut, a layer of coating comprising tocopherol and a barrier coating of acetylated monoglycerides. The Examiner acknowledges that Mate does not disclose applying a layer of

antioxidant to the surface of the nut, but contends that the claimed nut compositions are the same or obvious over the coated nut of Mate even though made by a different process. *See Office Action, page 3.* With regard to Claims 12 and 23, the Examiner again acknowledges that Mate does not disclose applying an antioxidant in a separate step, but contends that it would be obvious to switch the order of applying ingredients onto the nut. *See Office Action, page 5.*

Mate discloses coating a nut by dipping the nut in a solution of tocopherol and acetylated monoglycerides; or spraying the nut with a solution of butylated hydroxytoluene in corn oil. *See Mate at page 2510, "AMG Formulations and Coating Procedures" and "BHT Treatment."* Mate also discloses that natural antioxidants tend to be highly hydrophobic and can migrate more freely in relatively hydrophobic coatings such as acetylated monoglycerides. *See Mate, pages 2509-2510, bridging paragraph.* Therefore, Applicant respectfully submits that Mate discloses a coated nut comprising a single homogenous layer comprising an antioxidant and acetylated monoglyceride or corn oil. In contrast to the nut of Mate, Claim 1 and claims that depend from claim 1 relate to a nut with an antioxidant applied to the surface of the nut, and an edible film applied to the antioxidant. Applicant respectfully submits that the configuration of the claimed nuts is therefore distinct from the nut of Mate. For at least this reason, Claim 1 and claims that depend from Claim 1 are not obvious over at least Mate.

In addition, Mate teaches applying an antioxidant and edible film in a single step only; Mate does not teach applying an antioxidant in a separate step. Applicant respectfully submits that one of ordinary skill in the art would have no reason to perform an additional step of applying an antioxidant to the nut of Mate because an antioxidant mixture would already be applied to the surface of the nut. Furthermore, Applicant respectfully submits that a *prima facie* case of obviousness may not be established by merely selecting the order of performing the process steps of Mate because Mate teaches a single application step only. For at least the foregoing reasons, Applicant respectfully submits that Claims 1, 12, and claims that depend from Claims 1 and 12 are not obvious over at least Mate.

Grillo teaches a method for coating a nut comprising the steps: (a) mixing a cellulosic polymer, maltodextrin, and a plasticizer into water to form an aqueous suspension; (b) spraying this suspension onto the substrate to be coated; and (c) drying the film coating obtained. Therefore, Grillo does not provide any of the insufficiencies of Mate. Accordingly, Applicant

respectfully submits that a *prima facie* case of obviousness cannot be established for the pending claims over at least Mate in view of Grillo, and requests that the rejection of Claims 1-3, 7, 9-13, 16, 20, 21 and 23 over Mate and Grillo be withdrawn.

**Rejection of Claims 1-3, 7, 9-13, 16-28, and 30-32 over Steel, Grillo, Mate, Kester, and Fellows**

The Examiner contends that Steele discloses coating a nut with a hydrophilic colloid film former only, and acknowledges Steele does not disclose an antioxidant coating. The Examiner contends that one of ordinary skill in the art would combine the tocopherol or butylated hydroxytoluene of Mate with the coated nut of Steel to delay rancidity of the coated nut. *See Office Action, pages 7-8.*

Steele discloses a coated nut comprising a hydrophilic colloid film former and other components such as plasticizers. *See Steele claim 1, page 2, lines 28-31, and page 8, line 25 – page 9, line 13.* In contrast, the pending claims relate to an edible film that consists of hydroxypropylmethyl cellulose (HPMC), hydroxypropyl cellulose (HPC), methyl cellulose (MC), carboxymethyl cellulose (CMC), ethylmethyl cellulose (EMC), maltodextrin (MD), and their mixtures. Mate discloses applying a relatively hydrophobic solution comprising a highly hydrophobic antioxidant and acetylated monoglyceride or corn oil to a nut. *See Mate, pages 2509-2510, bridging paragraph, and page 2510, “AMG Formulations and Coating Procedures” and “BHT Treatment.”*

Applicant respectfully submits that one of ordinary skill in the art would not combine the coated nut of Steele with the antioxidant solution of Mate. Applicant submits that steps that include applying the hydrophilic colloid of Steele to either the hydrophobic solution of Mate or the hydrophobic antioxidant of Mate are non-trivial. Neither Steele nor Mate contemplate such steps, nor disclose how such steps may be performed. Moreover, Applicant respectfully submits that even if one of ordinary skill of the art could combine the acetylated monoglyceride or corn oil solutions of Mate with the coated nut of Steele, the combination would produce a coated nut with changed sensory properties, such as a waxy coating. In contrast, the coatings of the claimed compositions do not modify the organoleptic properties of the coated nut. Therefore, for at least

the foregoing reasons, one of ordinary skill in the art would not combine the nut of Steele with the antioxidant solution of Mate.

In addition, Applicant respectfully submits that neither Steele nor Mate disclose applying an antioxidant to the surface of a nut, and applying a film consisting of an edible compound to the antioxidant. Steele discloses applying a hydrophilic colloid to a nut, and Mate discloses applying an antioxidant to a nut. However, neither reference provides a reason that one of ordinary skill in the art would combine Steele and Mate to apply an antioxidant to the surface of a nut, and applying a film consisting of an edible compound to the antioxidant. Therefore, at least Steele and Mate do not disclose this element of the pending claims. Furthermore, Grillo, Kester or Fellows, do not supply any of the insufficiencies of Steele or Mate.

For at least the foregoing reasons, Applicant respectfully submits that the pending claims are non-obvious. None of the references disclose or reasonably suggest an antioxidant applied to the surface of a nut, and an edible coating applied to the antioxidant. Accordingly, Applicant respectfully submits that the pending claims are non-obvious and requests that the rejections under 35 USC § 103(a) be withdrawn.

#### **Other considerations**

The pending claims relate to a protective edible coating comprising an antioxidant applied directly to the surface of a nut, and an edible film applied to the antioxidant and consisting of an edible compound. In particular, the edible coating retards the rancidification of nut, protects the antioxidant applied to the surface of the nut, and the antioxidant and edible compound act synergistically to extend the shell life of the nut.

As shown in Example 4, nuts coated with a combination of an antioxidant applied to the surface of a nut and an edible film applied to the antioxidant (Treatment 3) have significantly improved oxidative stability over nuts coated with either an edible film only (Treatment 1), or antioxidant only (Treatment 2). *Example 4*. In particular, nuts coated with an applied tocopherol solution and HPMC film applied to the tocopherol, had an oxidative stability more than 1 hour greater than the oxidative stabilities of nuts coated with either a tocopherol solution only or a HPMC film only. *Page 18, lines 31-35, and Figure 5*. Moreover, this superior oxidative stability “indicates a synergic anti-oxidation action when the two treatments [namely, an applied

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antioxidant, and an edible coating applied to the antioxidant] are used together.” Page 19, lines 1-2.

**No Disclaimers or Disavowals**

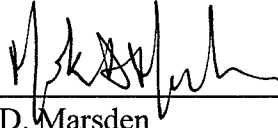
Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application. Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution. Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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